

SEQUENCE LISTING

<110> Walke, D. Wade
Hu, Yi
Nepomnichy, Boris
Turner, C. Alexander Jr
Zambrowicz, Brian

<120> Novel Human Kinases and Polynucleotides Encoding the Same

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Gln	Leu	Ala	Val	Glu	Arg	Ala	Lys	Gln	Val	Glu	Glu	Phe	Leu	Gln	Arg
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Lys	Arg	Glu	Ala	Met	Gln	Asn	Lys	Ala	Arg	Ala	Glu	Gly	His	Met	Val
				500				505					510		
Tyr	Leu	Ala	Arg	Leu	Arg	Gln	Ile	Arg	Leu	Gln	Asn	Phe	Asn	Glu	Arg
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Gln	Gln	Ile	Lys	Ala	Lys	Leu	Arg	Gly	Glu	Lys	Lys	Glu	Ala	Asn	His
				530				535					540		
Ser	Glu	Gly	Gln	Glu	Gly	Ser	Glu	Glu	Ala	Asp	Met	Arg	Arg	Lys	Lys
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Ile	Glu	Ser	Leu	Lys	Ala	His	Ala	Asn	Ala	Arg	Ala	Ala	Val	Leu	Lys
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Glu	Gln	Leu	Glu	Arg	Lys	Arg	Lys	Glu	Ala	Tyr	Glu	Arg	Glu	Lys	Lys
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Val	Trp	Glu	Glu	His	Leu	Val	Ala	Lys	Gly	Val	Lys	Ser	Ser	Asp	Val
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Ser	Pro	Pro	Leu	Gly	Gln	His	Glu	Thr	Gly	Gly	Ser	Pro	Ser	Lys	Gln
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Gln	Met	Arg	Ser	Val	Ile	Ser	Val	Thr	Ser	Ala	Leu	Lys	Glu	Val	Gly
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Val	Asp	Ser	Ser	Leu	Thr	Asp	Thr	Arg	Glu	Thr	Ser	Glu	Glu	Met	Gln
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Lys	Thr	Asn	Asn	Ala	Ile	Ser	Ser	Lys	Arg	Glu	Ile	Leu	Arg	Arg	Leu
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Asn	Glu	Asn	Leu	Lys	Ala	Gln	Glu	Asp	Glu	Lys	Gly	Met	Gln	Asn	Leu
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Ser	Asp	Thr	Phe	Glu	Ile	Asn	Val	His	Glu	Asp	Ala	Lys	Glu	His	Glu
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Gln	Leu	Val	Ile	Pro	Leu	Asp	Glu	Leu	Thr	Leu	Asp	Thr	Ser	Phe	Ser
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35 40 45
Gly Phe Ile Ala Lys Arg Ile Glu Lys Phe Leu Ser Pro Gln Leu Ile
50 55 60
Ala Glu Glu Phe Cys Leu Lys Thr Phe Ser Lys Phe Gly Ser Gln Pro
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Ile Pro Ala Lys Arg Pro Ala Ser Gly Gln Asn Ser Ile Ser Val Met
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Pro Ala Gln Lys Ile Thr Lys Pro Ala Ala Lys Tyr Gly Ile Pro Leu
100 105 110
Ala Tyr Lys Lys Tyr Gly Asp Lys Lys Leu His Glu Lys Lys Pro Leu
115 120 125
Gln Lys His Lys Gln Ala His Gln Thr Pro Glu Lys Arg Val Asn Thr
130 135 140
Gly Glu Glu Arg Arg Lys Ile Ser Glu Glu Ala Ala Arg Lys Arg Arg
145 150 155 160
Leu Glu Phe Ile Glu Lys Glu Lys Lys Gln Lys Asp Gln Ile Ile Ser
165 170 175
Leu Met Lys Ala Glu Gln Met Lys Arg Gln Glu Lys Glu Arg Leu Glu
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Arg Ile Asn Arg Ala Arg Glu Gln Gly Trp Arg Asn Val Leu Ser Ala
195 200 205
Gly Gly Ser Gly Glu Val Lys Ala Pro Phe Leu Gly Ser Gly Gly Thr
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Ile Ala Pro Ser Ser Phe Ser Ser Arg Gly Gln Tyr Glu His Tyr His
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Ala Ile Phe Asp Gln Met Gln Gln Arg Ala Glu Asp Asn Glu Ala
245 250 255
Lys Trp Lys Arg Glu Ile Tyr Gly Arg Gly Leu Pro Glu Arg Gln Lys
260 265 270
Gly Gln Leu Ala Val Glu Arg Ala Lys Gln Val Glu Glu Phe Leu Gln
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Arg Lys Arg Glu Ala Met Gln Asn Lys Ala Arg Ala Glu Gly His Met
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Val Tyr Leu Ala Arg Leu Arg Gln Ile Arg Leu Gln Asn Phe Asn Glu
305 310 315 320
Arg Gln Gln Ile Lys Ala Lys Leu Arg Gly Glu Lys Lys Glu Ala Asn
325 330 335
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Lys Ile Glu Ser Leu Lys Ala His Ala Asn Ala Arg Ala Ala Val Leu
355 360 365
Lys Glu Gln Leu Glu Arg Lys Arg Lys Glu Ala Tyr Glu Arg Glu Lys
370 375 380
Lys Val Trp Glu Glu His Leu Val Ala Lys Gly Val Lys Ser Ser Asp
385 390 395 400
Val Ser Pro Pro Leu Gly Gln His Glu Thr Gly Gly Ser Pro Ser Lys
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Gln Gln Met Arg Ser Val Ile Ser Val Thr Ser Ala Leu Lys Glu Val
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Gln Lys Thr Asn Asn Ala Ile Ser Ser Lys Arg Glu Ile Leu Arg Arg

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Asn Gly Ser Pro Arg Arg Ala Trp Gly Lys Ser Pro Thr Asp Ser Val		
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Leu Lys Ile Leu Gly Glu Ala Glu Leu Gln Leu Gln Thr Glu Leu Leu		
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675	680	685
Thr Ile Gln Glu Asn Glu Val Ser Glu Asp Gly Val Ser Ser Thr Val		
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Asp Gln Leu Ser Asp Ile His Ile Glu Pro Gly Thr Asn Asp Ser Gln		
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720		
His Ser Lys Cys Asp Val Asp Lys Ser Val Gln Pro Glu Pro Phe Phe		
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Thr Val Gly Asp Val Arg Gln Asp Asn Leu Glu Ile Asp Glu Ile Lys		
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Ala Asp Glu Asp Asp Asn Pro Ser Ser Glu Ser Ala Leu Asn Glu Glu		
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Trp His Ser Asp Asn Ser Asp Gly Glu Ile Ala Ser Glu Cys Glu Cys		
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Asp Ser Val Phe Asn His Leu Glu Glu Leu Arg Leu His Leu Glu Gln		
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Glu Met Gly Phe Glu Lys Phe Phe Glu Val Tyr Glu Lys Ile Lys Ala		
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Gln	Asn	Ile	Leu	Gly	Asn	Glu	His	Gln	His	Leu	Tyr	Ala	Lys	Ile	Leu
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Pro	Val	Pro	Ile	Leu	His	Gly	Ala	Ala	Ala	Leu	Ala	Asp	Asp	Leu	Ala	
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Val	Glu	Asp	Lys	Arg	Pro	Glu	Glu	Ile	Ile	Gln	Ile	Leu	Ala	Gln	Ser	
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35	40	45
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp		
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Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile		
Pro Ser Lys His Phe Gln Glu Arg		
65	70	
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atgtttgggt aaaaaagcct gcattcattt gtaaaagattc ataaaaactt acactactat		180
gagaagcaga gtccgggcc cattctccat ggtgcggcg ccttggccga tgatctggc		240
gaagagcttc agaacaagcc attaaacagt gagatcagag agctgttggaa actactgtca		300
aaacccaatg tgaaggctt gctctctgtt catgatactg tggctcagaa gaatttacgac		360
ccagtgttgc ctcctatgcc tgaagatatt gacgatgagg aagactcagt aaaaataatc		420
cgtctggta aaaatagaga accactggga gctaccatc agaaggatga acagaccggg		480
gcatcattt tggccagaat catgagagga ggagctgcag atagaagtgg tcttattcat		540
gttgggtatg aacttagggg agtcaacggg ataccagtgg aggataaaag gcctgaggaa		600
ataatacaga ttttggctca gtctcaggga gcaattacat ttaagattat accccggcagc		660
aaagaggaga caccatcaaa agaaggcaag atgtttatca aagccctt tgaactataat		720
cctaattggg ataaggcaat tccatgttaag gaagctggc tttcttcaa aaaggagat		780
attcttcaga ttatgagcca agatgtatgc acttgggtgc aagcggaaaca cgaagctgt		840
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<213> homo sapiens

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Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His
35 40 45
Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
50 55 60
Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
65 70 75 80
Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
85 90 95
Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
100 105 110
Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
115 120 125
Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
130 135 140
Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
145 150 155 160
Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
165 170 175
Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
180 185 190
Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
195 200 205
Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
210 215 220
Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
225 230 235 240
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
245 250 255
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
260 265 270
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
275 280 285
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
290 295 300
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser
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<212> PRT
<213> homo sapiens

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Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
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Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
35 40 45
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
50 55 60
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
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Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser
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<210> 15

<211> 327

<212> DNA

<213> homo sapiens

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gcaagaagaa	gccaggagag	tgatgggtt	gaatacattt	tcatttccaa	gcatttgtt	180
gagacagatg	tacaaaataa	caagtttatt	gaatatggag	aatataaaaa	caactactac	240
ggcacaagta	tagactcagt	tcggctctgtc	cttgctaaaa	acaaagtggat	tttggat	300
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<210> 16

<211> 108

<212> PRT

<213> homo sapiens

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Val Thr Val Pro His Thr Thr Arg Ala Arg Ser Gln Glu Ser Asp						
35 40 45						
Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val						
50 55 60						
Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr						
65 70 75 80						
Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val						
85 90 95						
Cys Leu Leu Asp Val Gln Pro His Val Ser Lys Gln						
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<210> 17

<211> 1128

<212> DNA

<213> homo sapiens

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atgtttgggt	aaaaaaggct	gcattcattt	gtaaagattc	atgaaaaact	acactactat	180
gagaaggcaga	gtccgggtcc	cattctccat	ggtgcggcgg	ccttggccga	tgatctggcc	240
gaagagctc	agaacaagcc	attaaacagt	gagatcagag	agctgttcaa	actactgtca	300
aaacccaatg	tgaaggcttt	gctctctgtt	catgatactg	tggctcagaa	gaattacgac	360
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cgtctggtca	aaaatagaga	accactggga	gctaccatta	agaaggatga	acagaccggg	480
gcgtatcattt	tggccagaat	catgagagga	ggagctgcag	atagaagtgg	tcttattcat	540

gttggtgatg	aacttagggg	agtcaacggg	ataccagtgg	aggataaaaag	gcctgaggaa	600
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gccaacccca	gggcaggcct	gatcccctca	aagcattcc	aggaaaaggag	attggcttg	900
agacgaccag	aaatatggt	tcagcccc	aaagtttcca	acagggaaatc	atctggttt	960
agaagaagtt	ttcgtcttag	tagaaaagat	aagaaaacaa	ataaatccat	gtatgaatgc	1020
aagaagagtg	atcgtacga	cacagctgac	gtacccacat	acgaaagaatg	gacaccgtat	1080
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<210> 18

<211> 375

<212> PRT

<213> homo sapiens

<400> 18

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Leu	Leu	Ala	Ala	Leu	Pro	Ala	Gln	Leu	Gln	Pro	His	Val	Asp	Ser	Gln
					20			25			30				
Glu	Asp	Leu	Thr	Phe	Leu	Trp	Asp	Met	Phe	Gly	Glu	Lys	Ser	Leu	His
					35			40			45				
Ser	Leu	Val	Lys	Ile	His	Glu	Lys	Leu	His	Tyr	Tyr	Glu	Lys	Gln	Ser
					50			55			60				
Pro	Val	Pro	Ile	Leu	His	Gly	Ala	Ala	Leu	Asp	Asp	Leu	Ala		
					65			70			75			80	
Glu	Glu	Leu	Gln	Asn	Lys	Pro	Leu	Asn	Ser	Glu	Ile	Arg	Glu	Leu	Leu
					85			90			95				
Lys	Leu	Leu	Ser	Lys	Pro	Asn	Val	Lys	Ala	Leu	Leu	Ser	Val	His	Asp
					100			105			110				
Thr	Val	Ala	Gln	Lys	Asn	Tyr	Asp	Pro	Val	Leu	Pro	Pro	Met	Pro	Glu
					115			120			125				
Asp	Ile	Asp	Asp	Glu	Glu	Asp	Ser	Val	Lys	Ile	Ile	Arg	Leu	Val	Lys
					130			135			140				
Asn	Arg	Glu	Pro	Leu	Gly	Ala	Thr	Ile	Lys	Lys	Asp	Glu	Gln	Thr	Gly
					145			150			155			160	
Ala	Ile	Ile	Val	Ala	Arg	Ile	Met	Arg	Gly	Gly	Ala	Ala	Asp	Arg	Ser
					165			170			175				
Gly	Leu	Ile	His	Val	Gly	Asp	Glu	Leu	Arg	Glu	Val	Asn	Gly	Ile	Pro
					180			185			190				
Val	Glu	Asp	Lys	Arg	Pro	Glu	Glu	Ile	Ile	Gln	Ile	Leu	Ala	Gln	Ser
					195			200			205				
Gln	Gly	Ala	Ile	Thr	Phe	Lys	Ile	Ile	Pro	Gly	Ser	Lys	Glu	Glu	Thr
					210			215			220				
Pro	Ser	Lys	Glu	Gly	Lys	Met	Phe	Ile	Lys	Ala	Leu	Phe	Asp	Tyr	Asn
					225			230			235			240	
Pro	Asn	Glu	Asp	Lys	Ala	Ile	Pro	Cys	Lys	Glu	Ala	Gly	Leu	Ser	Phe
					245			250			255				
Lys	Lys	Gly	Asp	Ile	Leu	Gln	Ile	Met	Ser	Gln	Asp	Asp	Ala	Thr	Trp
					260			265			270				
Trp	Gln	Ala	Lys	His	Glu	Ala	Asp	Ala	Asn	Pro	Arg	Ala	Gly	Leu	Ile
					275			280			285				
Pro	Ser	Lys	His	Phe	Gln	Glu	Arg	Arg	Leu	Ala	Leu	Arg	Arg	Pro	Glu
					290			295			300				
Ile	Leu	Val	Gln	Pro	Leu	Lys	Val	Ser	Asn	Arg	Lys	Ser	Ser	Gly	Phe
					305			310			315			320	
Arg	Arg	Ser	Phe	Arg	Leu	Ser	Arg	Lys	Asp	Lys	Lys	Thr	Asn	Lys	Ser
					325			330			335				
Met	Tyr	Glu	Cys	Lys	Lys	Ser	Asp	Gln	Tyr	Asp	Thr	Ala	Asp	Val	Pro
					340			345			350				
Thr	Tyr	Glu	Glu	Val	Thr	Pro	Tyr	Arg	Arg	Gln	Thr	Asn	Glu	Lys	Tyr
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<210> 19
<211> 414

<212> DNA
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tatggagaat ataaaaacaa ctactacgac acaagtatag actcagttcg gtctgtcctt 360
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<211> 137

<212> PRT

<213> homo sapiens

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20 25 30
Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
35 40 45
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
50 55 60
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
65 70 75 80
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
85 90 95
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
100 105 110
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
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Asp Val Gln Pro His Val Ser Lys Gln
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<210> 21

<211> 1422

<212> DNA

<213> homo sapiens

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	gagaagcaga	gtcccggtcc	cattctccat	ggtgccgg	ctttggccga	tgatctggcc	240
	gaagagcttc	agaacaagcc	attaaaacagt	gagatcagag	agctgttcaa	actactgtca	300
	aaacccaatg	tgaaggctt	gctctctgtt	catgatactg	tggctcagaa	gaattacgac	360
	ccagtgttgc	ctcctatgcc	tgaagatatt	gacgatgagg	aagactcagt	aaaaataatc	420
	cgtctgttca	aaaatagaga	accactggga	gctaccatta	agaaggatga	acagaccggg	480
	gcgatcattt	tggccagaat	catgagagga	ggagctgcag	atagaagtgg	tcttattcat	540
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	ataatacaga	tttggctca	gtctcaggaa	gcaattacat	ttaagattat	acccggcagc	660
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	attcttcaga	ttatgagcca	agatgtatca	acttggtggc	aagcgaaaca	cgaactgtat	840
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aagaagagt	atcagtaacga	cacagctgac	gtacccacat	acgaagaagt	gacaccgtat	1080
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ccccatacca	ccagagcaag	aagaagccag	gagatgtatc	gtgttgaata	catttcatt	1260
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<210> 22

<211> 473

<212> PRT

<213> homo sapiens

<400> 22

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						20			25				30		
Glu	Asp	Leu	Thr	Phe	Leu	Trp	Asp	Met	Phe	Gly	Glu	Lys	Ser	Leu	His
						35			40			45			
Ser	Leu	Val	Lys	Ile	His	Glu	Lys	Leu	His	Tyr	Tyr	Glu	Lys	Gln	Ser
						50			55			60			
Pro	Val	Pro	Ile	Leu	His	Gly	Ala	Ala	Ala	Leu	Ala	Asp	Asp	Leu	Ala
65						70				75			80		
Glu	Glu	Leu	Gln	Asn	Lys	Pro	Leu	Asn	Ser	Glu	Ile	Arg	Glu	Leu	Leu
						85			90			95			
Lys	Leu	Leu	Ser	Lys	Pro	Asn	Val	Lys	Ala	Leu	Leu	Ser	Val	His	Asp
						100			105			110			
Thr	Val	Ala	Gln	Lys	Asn	Tyr	Asp	Pro	Val	Leu	Pro	Pro	Met	Pro	Glu
						115			120			125			
Asp	Ile	Asp	Asp	Glu	Glu	Asp	Ser	Val	Lys	Ile	Ile	Arg	Leu	Val	Lys
						130			135			140			
Asn	Arg	Glu	Pro	Leu	Gly	Ala	Thr	Ile	Lys	Lys	Asp	Glu	Gln	Thr	Gly
145						150				155			160		
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						165			170			175			
Gly	Leu	Ile	His	Val	Gly	Asp	Glu	Leu	Arg	Glu	Val	Asn	Gly	Ile	Pro
						180			185			190			
Val	Glu	Asp	Lys	Arg	Pro	Glu	Glu	Ile	Ile	Gln	Ile	Leu	Ala	Gln	Ser
						195			200			205			
Gln	Gly	Ala	Ile	Thr	Phe	Lys	Ile	Ile	Pro	Gly	Ser	Lys	Glu	Glu	Thr
						210			215			220			
Pro	Ser	Lys	Glu	Gly	Lys	Met	Phe	Ile	Lys	Ala	Leu	Phe	Asp	Tyr	Asn
225						230				235			240		
Pro	Asn	Glu	Asp	Lys	Ala	Ile	Pro	Cys	Lys	Glu	Ala	Gly	Leu	Ser	Phe
						245			250			255			
Lys	Lys	Gly	Asp	Ile	Leu	Gln	Ile	Met	Ser	Gln	Asp	Asp	Ala	Thr	Trp
						260			265			270			
Trp	Gln	Ala	Lys	His	Glu	Ala	Asp	Ala	Asn	Pro	Arg	Ala	Gly	Leu	Ile
						275			280			285			
Pro	Ser	Lys	His	Phe	Gln	Glu	Arg	Arg	Leu	Ala	Leu	Arg	Arg	Pro	Glu
						290			295			300			
Ile	Leu	Val	Gln	Pro	Leu	Lys	Val	Ser	Asn	Arg	Lys	Ser	Ser	Gly	Phe
305						310				315			320		
Arg	Arg	Ser	Phe	Arg	Leu	Ser	Arg	Lys	Asp	Lys	Lys	Thr	Asn	Lys	Ser
						325			330			335			
Met	Tyr	Glu	Cys	Lys	Lys	Ser	Asp	Gln	Tyr	Asp	Thr	Ala	Asp	Val	Pro
						340			345			350			
Thr	Tyr	Glu	Glu	Val	Thr	Pro	Tyr	Arg	Arg	Gln	Thr	Asn	Glu	Lys	Tyr
						355			360			365			
Arg	Leu	Val	Val	Leu	Val	Gly	Pro	Val	Gly	Val	Gly	Leu	Asn	Glu	Leu

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370	375	380
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val		
385	390	395
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu		400
405	410	415
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn		
420	425	430
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser		
435	440	445
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu		
450	455	460
Asp Val Gln Pro His Val Ser Lys Gln		
465	470	

<210> 23
<211> 750
<212> DNA
<213> homo sapiens

<400> 23		
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aaggcaattc catgttaagga agctgggc ttctttcaaaa agggagatcat tcttcagatt		120
atgagccaag atgatcaac ttggtgtccaa gcgaaacacg aagctgatgc caaccccaagg		180
gcaggcttgc tccccctcaaa gcatttccag gaaaggagat tggcttgag acgaccagaa		240
atattggttc agccccctgaa agtttccaa acggaaatcat ctgggttttag aagaagtttt		300
cgtcttagta gaaaagataa gaaaacaaat aaatccatgt atgaatgcaa gaagagtgtat		360
cgtacgaca cagctgacgt acccacatac gaagaagtgaa caccgtatcg gcgacaaact		420
aatgaaaaat acagactcgt tgcgttgggtt ggtcccggtt gagtagggctt gaatgaactg		480
aaacgaaagc tgctgatcag tgacacccag cactatggcg tgacagtgcc ccataccacc		540
agagcaagaa gaagccagga gagtgtatgggtt gttgaataca ttttcatttc caagcatttgc		600
tttgagacag atgtacaaaa taacaagttt attgaatatg gagaatataa aaacaactac		660
tacggcacaa gtatagactc agttcggtt gtccttgcta aaaacaaaat ttgtttgtt		720
gtatgttcaag taaacaatgtt		750

<210> 24
<211> 249
<212> PRT
<213> homo sapiens

<400> 24		
Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn		
1 5 10 15		
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe		
20 25 30		
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp		
35 40 45		
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile		
50 55 60		
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu		
65 70 75 80		
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe		
85 90 95		
Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser		
100 105 110		
Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro		
115 120 125		
Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr		
130 135 140		
Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu		
145 150 155 160		
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val		
165 170 175		
Pro His Thr Thr Arg Ala Arg Ser Gln Glu Ser Asp Gly Val Glu		

180	185	190
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn		
195	200	205
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser		
210	215	220
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu		
225	230	235
Asp Val Gln Pro His Val Ser Lys Gln		
245		

<210> 25
<211> 468
<212> DNA
<213> homo sapiens

<400> 25			
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gcaagaagaa gcccaggagtg tcatgggttt gaatacattt tcatttccaa gcatttttt			180
gagacagatgt tacaaaataaa caagtttattt gaatatggag aatataaaaa caactactac			240
ggcacaagta tagactcagt tcggctgtc cttgctaaaa acaaagtttggat			300
gttcagcctc atacagtgaa gcatttaagg acactagaat ttaagcccta tgttatattt			360
ataaaagcctc catcaataga gcgtttgaga gaaacaagaa aaaatgc当地 gattatttca			420
accagagatgt accaagggtgc tgcaaaaaccc ttcacacaag gagaatag			468

<210> 26
<211> 155
<212> PRT
<213> homo sapiens

<400> 26			
Met Cys Cys Pro Lys Thr Ala Cys Arg Gly Pro Val Gly Val Gly Leu			
1 5 10 15			
Asn Glu Leu Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly			
20 25 30			
Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp			
35 40 45			
Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val			
50 55 60			
Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr			
65 70 75 80			
Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val			
85 90 95			
Cys Leu Leu Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu			
100 105 110			
Glu Phe Lys Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg			
115 120 125			
Leu Arg Glu Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp			
130 135 140			
Gln Gly Ala Ala Lys Pro Phe Thr Gln Gly Glu			
145 150 155			

<210> 27
<211> 555
<212> DNA
<213> homo sapiens

<400> 27			
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gtgacaccgt atcggcgaca aactaatgaa aaatacagac tcgttgcctt gggtggccc			120
gtggggatgt ggctgaatga actgaaacga aagctgctga tcagtgcacac ccagcactat			180
ggcgtgacag tgccccatac caccagagca agaagaagcc aggagagtga tgggttgaa			240
tacattttca ttccaagca ttgtttgag acagatgtac aaaataacaa gtttattgaa			300

tatggagaat ataaaaacaa ctactacggc acaagtatag actcagttcg gtctgtcctt
 gctaaaaaca aagtttgggtt gttggatgtt cagcctcata cagtgaagca tttaggaca
 ctagaattta agccctatgt gatattata aagcctccat caatagagcg tttgagagaa
 acaagaaaaa atgcaaagat tatttcaagc agagatgacc aagggtgctgc aaaacccttc
 acacaaggag aatag

<210> 28
 <211> 184
 <212> PRT
 <213> homo sapiens

<400> 28
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 1 5 10 15
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 20 25 30
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 35 40 45
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 50 55 60
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 65 70 75 80
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 85 90 95
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 100 105 110
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 115 120 125
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 130 135 140
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 145 150 155 160
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 165 170 175
 Ala Lys Pro Phe Thr Gln Gly Glu
 180

<210> 29
 <211> 1563
 <212> DNA
 <213> homo sapiens

<400> 29
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 ctgccagccc agctgcagcc acatgtggat agccaggaag acctgaccc cctctggat
 atgtttggtg aaaaaagcct gcattcattt gtaaagattt ataaaaaaact acactactat
 gagaaggcaga gtcgggtgcc cattctccat ggtgcggcgg cttggccga tgatctggcc
 gaagagcttc agaacaagcc attaaacagt gagatcagag agctgttcaa actactgtca
 aaacccaatg tgaaggcttt gctctctgtt catgatactg tggctcagaa gaattacgac
 ccagtgttgc ctccatgcc tgaagatatt gacgatgagg aagactcaaaaataatc
 cgtctggtca aaaatagaga accactggg gctaccatc aaaaaaaaaatc
 gcgatcattt tggccagaat catgagagga ggagctgcag atagaagtgg tcttattcat
 gttgggtatg aaccttaggg agtcaacggg ataccatgtt aggataaaaag gcctgaggaa
 ataatacaga ttggctca gtctcaggaa gcaattatcat ttaaggattt acccggcagc
 aaagaggaga caccatcaaa agaaggcaga atgtttatca aagcccttt tgactataat
 cctaattggg ataaaggcaat tccatgtttaa gaagctggc tttcttccaa aaaggagat
 attcttcaga ttatggccca agatgtatca acttgggtgc aagcgaaaca cgaagctgtat
 gccaacccca gggcaggcgtt gatccccctca aagcatttcc agggaaaggag attggcttt
 agacgaccag aatatttgtt tcagccccctg aaagtttcca acaggaaatc atctgggttt
 agaagaagtt ttgttcttag tagaaaaat aagaaaaacaa ataaaatccat gtatgaatgc
 aagaagatg atcagttacca cacagctgc gtaccccatc acgaagaatg gacaccgtat
 cggcgcacaaa ctaatgaaaaa atacagactc gttgttgg ttggccgtt gggagtaggg
 ctqaatgaac tggaaacggaaa gctgctgatc agtgcacaccc agcactatgg cgtgcacatgt

ccccatacca ccagagcaag aagaagccag gagagtgatg gtgttgaata catttcatt 1260
 tccaaggcatt tggttgagac agatgtacaa aataacaat ttattgaata tggagaatat 1320
 aaaaacaact actacgcac aagtagac tcagttcggt ctgtccttgc taaaaacaaa 1380
 gtttgggttgc tggatgttca gcctcataca gtgaagcatt taaggacact agaatttaag 1440
 ccctatgtga tatttataaa gcctccatca atagagcgtt tgagagaaac aagaaaaaat 1500
 gcaaagatta tttcaagcag agatgacca ggtgctgaa aacccttcac acaaggagaa 1560
 tag 1563

<210> 30
 <211> 520
 <212> PRT
 <213> homo sapiens

<400> 30
 Met Pro Ala Leu Ser Thr Gly Ser Gly Ser Asp Thr Gly Leu Tyr Glu
 1 5 10 15
 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His
 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 325 330 335
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 340 345 350
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 370 375 380
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val

385	390	395	400
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu			
405	410	415	
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn			
420	425	430	
Lys Phe Ile Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser			
435	440	445	
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu			
450	455	460	
Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys			
465	470	475	480
Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu			
485	490	495	
Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala			
500	505	510	
Ala Lys Pro Phe Thr Gln Gly Glu			
515	520		

<210> 31

<211> 891

<212> DNA

<213> homo sapiens

<400> 31

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atgagccaag	atgatgcac	ttggtgtccaa	gcgaaacacg	aagctgtatgc	caaccccagg	180
gcaggcgttga	tccccctcaaa	gcatttccag	gaaaggagat	tggcttttag	acgaccagaa	240
atattggttc	agcccttgaa	agtttccaac	agggaaatcat	ctggtttttag	aagaagtttt	300
cgtcttagta	gaaaagataaa	gaaaacaaaat	aaatccatgt	atgaatgcaa	gaagagtat	360
cagtcgaca	cagctgacgt	acccacatac	gaagaagtga	caccgtatcg	gcgacaaaact	420
aatgaaaaat	acagactcgt	tgcttggtt	ggtcccgtag	gagtagggct	aatgaaactg	480
aaacgaaagc	tgctgatcg	tgacacccag	cactatggcg	tgacagtgcc	ccataaccacc	540
agagcaagaa	gaagccagga	gagtgtatgg	gttgaataca	ttttcatttc	caagcatttg	600
tttgagacag	atgtacaaaa	taacaagttt	attgaatatg	gagaatataa	aaacaactac	660
tacggcacaa	gtatagactc	agttcggctc	gtccttgcta	aaaacaaaatg	ttgtttgttg	720
gatgttcagc	ctcatacagt	gaagcattta	aggacactag	aatttaagcc	ctatgtgata	780
tttataaagc	ctccatcaat	agagcgtttg	agagaaacaa	gaaaaaatgc	aaagattatt	840
tcaaggcagag	atgaccaagg	tgctgcaaaa	cccttcacac	aaggagaata	g	891

<210> 32

<211> 296

<212> PRT

<213> homo sapiens

<400> 32

Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn			
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Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe			
20	25	30	
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp			
35	40	45	
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile			
50	55	60	
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu			
65	70	75	80
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe			
85	90	95	
Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser			
100	105	110	
Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro			
115	120	125	
Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr			

130	135	140
Arg	Leu	Val
Val	Val	Leu
Leu	Val	Gly
Gly	Pro	Val
Val	Gly	Val
145	150	155
Lys	Arg	Lys
Leu	Leu	Ile
Ile	Ser	Asp
Asp	Thr	Gln
Thr	Gly	His
Gly	Tyr	Tyr
165	170	175
Pro	His	Thr
Thr	Arg	Ala
Arg	Arg	Arg
Ser	Gln	Glu
Glu	Ser	Asp
Asp	Gly	Val
180	185	190
Tyr	Ile	Phe
Ile	Ser	Lys
Lys	His	Leu
Leu	Phe	Glu
Glu	Thr	Asp
Asp	Val	Gln
Gln	Asn	Asn
195	200	205
Lys	Phe	Ile
Ile	Glu	Tyr
Tyr	Gly	Glu
Glu	Tyr	Lys
Lys	Asn	Asn
Asn	Tyr	Tyr
Tyr	Gly	Thr
Thr	Ser	Ser
Ile	Asp	Ser
Asp	Val	Val
Val	Arg	Arg
Arg	Ser	Val
Val	Leu	Ala
Ala	Lys	Asn
Asn	Leu	Lys
210	215	220
Ile	Asp	Ser
Ser	Val	Val
Val	Arg	Arg
Arg	Ser	Val
Val	Leu	Ala
Ala	Lys	Asn
Asn	Leu	Lys
225	230	235
240		
Asp	Val	Gln
Gln	Pro	His
His	Thr	Val
Thr	Val	Lys
Lys	His	Leu
Leu	Arg	Thr
Arg	Leu	Glu
Glu	Phe	Lys
Pro	Tyr	Val
Tyr	Ile	Phe
Ile	Lys	Pro
Pro	Pro	Ser
Ser	Ile	Glu
Glu	Arg	Leu
Arg	Arg	Arg
Arg	Asp	Asp
Asp	Gln	Gly
Gly	Glu	Ala
Ala	Lys	Pro
Pro	Phe	Thr
Thr	Gln	Gly
Gly	Glu	
	275	280
	285	
290	295	

<210> 33

<211> 585

<212> DNA

<213> homo sapiens

<400> 33

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gcaagaagaa	gccaggagag	tgatgggtt	gaatacattt	tcatttccaa	gcatttgttt	180
gagacagatg	tacaaaataa	caagtttatt	gaatatggag	aatataaaaa	caactactac	240
ggcacaagta	tagactcagt	tcggctgtc	cttgctaaaa	acaaagttt	tttggggat	300
gttcagcctc	atacagtgaa	gcatttaagg	acactagaat	ttaagcccta	tgtgatattt	360
ataaaaggcctc	catcaataga	gcgtttgaga	gaaacaagaa	aaaatgcaaa	gattatttca	420
agcagagatg	accaagggtgc	tgcäääaccc	ttcacagaaag	aagattttca	agaaatgatt	480
aaatctgcac	agataatgga	aagtcaatat	ggtcatctt	ttgacaaaaat	tataataaaat	540
gatgacctca	ctgtggcatt	caaaaaaaaaa	aaaaaaaaaa	aaaaaa		585

<210> 34

<211> 195

<212> PRT

<213> homo sapiens

<400> 34

Met	Cys	Cys	Pro	Lys	Thr	Ala	Cys	Arg	Gly	Pro	Val	Gly	Val	Gly	Leu	
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Asn	Glu	Leu	Lys	Arg	Lys	Leu	Leu	Ile	Ser	Asp	Thr	Gln	His	Tyr	Gly	
																20
Val	Thr	Val	Pro	His	Thr	Thr	Arg	Ala	Arg	Arg	Ser	Gln	Glu	Ser	Asp	35
																40
Gly	Val	Glu	Tyr	Ile	Phe	Ile	Ser	Lys	His	Leu	Phe	Glu	Thr	Asp	Val	50
																55
Gln	Asn	Asn	Lys	Phe	Ile	Glu	Tyr	Gly	Glu	Tyr	Lys	Asn	Asn	Tyr	Tyr	65
																70
Gly	Thr	Ser	Ile	Asp	Ser	Val	Arg	Ser	Val	Leu	Ala	Lys	Asn	Lys	Val	85
																90
Cys	Leu	Leu	Asp	Val	Gln	Pro	His	Thr	Val	Lys	His	Leu	Arg	Thr	Leu	100
																105
Glu	Phe	Lys	Pro	Tyr	Val	Ile	Phe	Ile	Lys	Pro	Pro	Ser	Ile	Glu	Arg	115
																120
Leu	Arg	Glu	Thr	Arg	Lys	Asn	Ala	Lys	Ile	Ile	Ser	Ser	Arg	Asp	Asp	130
																135
																140

Gln Gly Ala Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile
 145 150 155 160
 Lys Ser Ala Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys
 165 170 175
 Ile Ile Ile Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys
 180 185 190
 Lys Lys Lys
 195

<210> 35

<211> 672

<212> DNA

<213> homo sapiens

<400> 35

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gtgggagtag ggctgaatga	actgaaacga aagctgctga	tcagtgacac ccagcactat	180
ggcgtgacag tgccccatac	caccagagca agaagaagcc	aggagagtga tggtgttcaa	240
tacattttca tttccaagca	tttggtttag acagatgtac	aaaataacaa gtttattgaa	300
tatggagaat ataaaaacaa	ctactacggc acaagtatag	actcagttcg gtctgtcctt	360
gctaaaaaca aagtttgttt	gttggatgtt cagcctcata	cagtaagca ttaaggaca	420
ctagaattta agccctatgt	gatattttata aagcctccat	caatagagcg tttgagagaa	480
acaagaaaaa atgcaaagat	tatttcaagc agagatgacc	aagggtgctgc aaaacccttc	540
acagaagaag attttcaaga	aatgattaaa tctgcacaga	taatggaaag tcaatatggt	600
catcttttg acaaaattat	aataaatgat gacctcactg	tggcattcaa aaaaaaaaaaa	660
aaaaaaaaaa aa			672

<210> 36

<211> 224

<212> PRT

<213> homo sapiens

<400> 36

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20 25 30			
Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu			
35 40 45			
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val			
50 55 60			
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu			
65 70 75 80			
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn			
85 90 95			
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser			
100 105 110			
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu			
115 120 125			
Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys			
130 135 140			
Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu			
145 150 155 160			
Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala			
165 170 175			
Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala			
180 185 190			
Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile			
195 200 205			
Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys			
210 215 220			

<210> 37
 <211> 1680
 <212> DNA
 <213> homo sapiens

<400> 37
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 atgtttgggt aaaaaaggct gcattcattt gtaaaagattt atgaaaaactt acactactat 180
 gagaaggcaga gtccgggtcc cattctccat ggtgcggcgg cttggccga tgatctggcc 240
 gaagagctc agaacaagcc attaaacagt gagatcagag agctgttcaa actactgtca 300
 aaacccaatg tgaaggctt gctctgtt catgatactg tggctcagaa gaattacgac 360
 ccagtgttc ctcctatgca tgaagatatt gacgatgagg aagactcagt aaaaataatc 420
 cgtctggtca aaaatagaga accactggg gctaccatta agaaggatga acagaccggg 480
 gcatcattt tggccagaat catgagagga ggactgcag atagaagtgg tcttattcat 540
 gttgggtatg aacttaggaa agtcaacggg ataccagtgg aggataaaag gcctgaggaa 600
 ataatacaga ttttggctca gtctcagggaa gcaattacat ttaagattat accccggcagc 660
 aaagaggaga caccatcaa agaaggcaag atgtttatca aagcccttgg tgaactataat 720
 ctaatgagg ataaggcaat tccatgttcaag gaagctggc tttcttcaa aaaggagat 780
 attcttcaga ttatgagcca agatgatgca acttgggtgc aagcggaaaca cgaagctgtat 840
 gccaacccca gggcaggctt gatccccctca aagcatttcc aggaaaggag attggctttg 900
 agacgaccag aaatattggt tcagccccctg aaagtttcca acagaaatc atctgggtt 960
 agaagaagtt ttctgtttag tagaaaagat aagaaaacaa ataaatccat gtatgaatgc 1020
 aagaagagtg atcagtacga cacagctgac gtacccacat acgaagaagt gacaccgtat 1080
 cggcgacaaa ctaatgaaaa atacagactt gttgtcttgg ttggcccgt gggagtaggg 1140
 ctgaatgaac tggaaacgaaa gctgctgtat agtgcaccc acgactatgg cgtgacagt 1200
 ccccatatcca ccagagcaag aagaaggccag gagagtgttgc ttgttgcata cattttcatt 1260
 tccaaggcatt ttgttggagac agatgtacaa aataacaat ttatgttgcata ttggagaat 1320
 aaaaacaact actacggcac aagtatagac tcagttcggt ctgttgcata taaaacaaa 1380
 gtttgggttgg tggatgttca gcttcataca gtgaagcatt taaggacact agaatttaag 1440
 ccctatgttca tattttaaa gcttcataca atagagcgtt tgagagaaac aagaaaaaat 1500
 gcaaagattt tttcaagcag agatgaccaa ggtgctgcaaa aacccttcac agaagaagat 1560
 tttcaagaaa tgattaaatc tgacagata atggaaatgc aatatggtca tcttttgcac 1620
 aaaattataaa taaatgttgc ctttcactgttgcattcaaaa aaaaaaaaaa aaaaaaaaaa 1680

<210> 38
 <211> 560
 <212> PRT
 <213> homo sapiens

<400> 38
 Met Pro Ala Leu Ser Thr Gly Ser Gly Ser Asp Thr Gly Leu Tyr Glu
 1 5 10 15
 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His
 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser
 165 170 175

Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser
 325 330 335
 Met Tyr Glu Cys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 340 345 350
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 370 375 380
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 385 390 395 400
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 405 410 415
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 420 425 430
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 435 440 445
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 450 455 460
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 465 470 475 480
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 485 490 495
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 500 505 510
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 515 520 525
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 530 535 540
 Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys
 545 550 555 560

<210> 39
 <211> 1008
 <212> DNA
 <213> homo sapiens

<400> 39
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 aaggcaattc catgtaaagga agctgggctt tctttcaaaa aggagatat tcttcagatt 120
 atgagccaag atgatgcaac ttgggtggcaa gcgaaaacacg aagctgtatgc caaccccaagg 180
 gcaggcttga tccccctcaa gcatttccag gaaaaggagat tggcttttag acgaccagaa 240
 atattggttc agccctcgaa agtttccaaac agggaaatcat ctggtttttag aagaagttt 300
 cgtcttagta gaaaagataa gaaaacaat aaatccatgt atgaatgcaa gaagagtgat 360
 cagtacgaca cagctgacgt acccacatac gaagaagtga caccgtatcg gcgacaaact 420
 aatgaaaaat acagactcgt tgtcttggtt ggtccctgtgg gagtagggct gaatgaactg 480

aaacgaaa	gc tgctgatcg	tgacacccag	cactatggcg	tgacagtgcc	ccataccacc	540
agagcaagaa	gaagccagga	gaggatgg	gttgaataca	tttcatttc	caagcatttg	600
tttgagacag	atgtacaaaa	taacaagttt	attgaatatg	gagaatataa	aaacaactac	660
tacggcacaa	gtatagactc	agttcggtct	gtccttgcta	aaaacaagg	ttgtttgttg	720
gatgttcagc	ctcatacagt	gaagcattt	aggacactag	aatttaagcc	ctatgtgata	780
tttataaagc	ctccatcaat	agagcgttg	agagaaacaa	gaaaaaatgc	aaagattatt	840
tcaagcagag	atgaccaagg	tgctgcaaaa	cccttcacag	aagaagattt	tcaagaaatg	900
attnaatctg	cacagataat	gaaaagtcaa	tatggtcatc	tttttgacaa	aattataata	960
aatgatgacc	tcactgtggc	attcaaaaaa	aaaaaaaaa	aaaaaaaaa	aaaaaaaaa	1008

<210> 40

<211> 336

<212> PRT

<213> homo sapiens

<400> 40						
Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn						
1	5	10	15			
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe						
20	25	30				
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp						
35	40	45				
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile						
50	55	60				
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu						
65	70	75	80			
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe						
85	90	95				
Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser						
100	105	110				
Met Tyr Glu Cys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro						
115	120	125				
Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr						
130	135	140				
Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu						
145	150	155	160			
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val						
165	170	175				
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu						
180	185	190				
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn						
195	200	205				
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser						
210	215	220				
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu						
225	230	235	240			
Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys						
245	250	255				
Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu						
260	265	270				
Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala						
275	280	285				
Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala						
290	295	300				
Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile						
305	310	315	320			
Asn Asp Asp Leu Thr Val Ala Phe Lys Lys Lys Lys Lys Lys Lys						
325	330	335				

<210> 41

<211> 636

<212> DNA

<213> homo sapiens

<400> 41
 atgtgctgcc caaagactgc ttgcagaggt cccgtggag taggctgaa tgaactgaaa 60
 cggaaagctgc tgatcaagtga cacccagcac tatggcgtga cagtccccca taccaccaga 120
 gcaagaagaa gccaggagag tgatgggtt gaatacattt tcatttccaa gcattttgtt 180
 gagacagatg tacaaaataa caagtttatt gaatatggag aatataaaaa caactactac 240
 ggcacaagta tagactca gtccgtctgtc cttgctaaaa acaaagttt tttgttgat 300
 gttcagccctc atacagtga gcatttaagg acactagaat ttaagcccta tgtgatatt 360
 ataaaggccctc catcaataga gcgttgaga gaaacaagaa aaaatgcaaa gattatttca 420
 agcagagatg accaaggtgc tgccaaaccc ttcacagaag aagattttca agaaatgatt 480
 aaatctgcac agataatgga aagtcaatat ggtcatctt ttgacaaaat tataataat 540
 gatgacctca ctgtggcatt caatgagctc aaaacaacctt ttgacaaaatt agagacagag 600
 acccattggg tgccagttag ctggttacat tcataa 636

<210> 42

<211> 211
 <212> PRT
 <213> homo sapiens

<400> 42
 Met Cys Cys Pro Lys Thr Ala Cys Arg Gly Pro Val Gly Val Gly Leu
 1 5 10 15
 Asn Glu Leu Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly
 20 25 30
 Val Thr Val Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp
 35 40 45
 Gly Val Glu Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val
 50 55 60
 Gln Asn Asn Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr
 65 70 75 80
 Gly Thr Ser Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val
 85 90 95
 Cys Leu Leu Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu
 100 105 110
 Glu Phe Lys Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg
 115 120 125
 Leu Arg Glu Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp
 130 135 140
 Gln Gly Ala Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile
 145 150 155 160
 Lys Ser Ala Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys
 165 170 175
 Ile Ile Ile Asn Asp Asp Leu Thr Val Ala Phe Asn Glu Leu Lys Thr
 180 185 190
 Thr Phe Asp Lys Leu Glu Thr Glu Thr His Trp Val Pro Val Ser Trp
 195 200 205
 Leu His Ser
 210

<210> 43

<211> 723
 <212> DNA
 <213> homo sapiens

<400> 43
 atgttatgaat gcaagaagag tgatcaagtac gacacagctg acgtacccac atacgaagaa 60
 gtgacaccgt-atcgccgaca aactaatgaa aaatacagac tcgttgtctt gggtggccc 120
 gtgggagtag ggctgaatga actgaaacga aagctgctga tcagtgcac ccagcactat 180
 ggcgtgacag tgccccatac caccagagca agaagaagcc aggagagtgaa tggtgtgaa 240
 tacatttca ttccaagca ttgtttgag acagatgtac aaaataacaa gtttattgaa 300
 tatggagaat ataaaaacaa ctactacggc acaagtatag actcagttcg gtctgtcctt 360
 gctaaaaaca aagttgtt gttggatgtt cagcctcata cagtgaagca tttaaggaca 420
 cttagaattt agccttatgt gatatttata aagcctccat caatagagcg tttgagagaa 480
 acaagaaaaa atgcaaagat tatttcaagc agagatgacc aaggtgctgc aaaacccttc 540

acagaagaag atttcaaga aatgattaaa tctgcacaga taatggaaag tcaatatggt
 600
 catcttttg aaaaaattat aataaatgtat gacctcactg tggcattcaa tgagctcaa
 660
 acaacttttg acaaatttga gacagagacc cattgggtgc cagttagctg gttacattca
 720
 taa
 723

<210> 44
 <211> 240
 <212> PRT
 <213> homo sapiens

<400> 44
 Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 15
 1 5 10
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 20 25 30
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 35 40 45
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 50 55 60
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 65 70 75 80
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 85 90 95
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 100 105 110
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 115 120 125
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 130 135 140
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 145 150 155 160
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 165 170 175
 Ala Lys Pro Phe Thr Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 180 185 190
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 195 200 205
 Asn Asp Asp Leu Thr Val Ala Phe Asn Glu Leu Lys Thr Thr Phe Asp
 210 215 220
 Lys Leu Glu Thr Glu Thr His Trp Val Pro Val Ser Trp Leu His Ser
 225 230 235 240

<210> 45
 <211> 1731
 <212> DNA
 <213> homo sapiens

<400> 45
 atgccagtt tgtcaacggg atctggagt gacactggc tggatggct gttggctgt
 60
 ctgccagcc agtcgcagcc acatgtggat agccaggaaac acctgaccc cctctggat
 120
 atgtttggtg aaaaaagcct gcattcatg gtaaagattc ataaaaact acactactat
 180
 gagaaggcaga gtccgggtcc cattctccat ggtgcggcgg ccttggccga tgatctggcc
 240
 gaagagctc agaacaagcc attaaacagt gagatcagag agctgtgaa actactgtca
 300
 aaacccaatg tgaaggctt gctctctgtt catgatactg tggctcagaa gaattacgac
 360
 ccagtgttc ctcctatgcc tgaagatatt gacgatgagg aagactcagt aaaaataatc
 420
 cgtctggtca aaaatagaga accactggga gctaccatc agaaggatga acagaccggg
 480
 gcgatcattt tggccagaat catgagagga ggagctgcag atagaagtgg tcttattcat
 540
 gttgggtatg aacttaggga agtcaacggg ataccatgg aggataaaag gcctgaggaa
 600
 ataatacaga tttggctca gtctcaggaa gcaattacat ttaagattat accccggcagc
 660
 aaagaggaga caccatcaa agaaggcaag atgtttatca aagcccttt tgactataat
 720
 cctaattgagg ataaggcaat tccatgtaaag gaagctggc tttcttcaa aaaggagat
 780
 attcttcaga ttatgagcca agatgtgc acattggc aagcggaaaca cgaagctgat
 840
 gccaacccca gggcaggcctt gatcccctca aagcatttcc agggaaaggag attggcttg
 900

agacgaccag aaatatttgt tcagccctg aaagttcca acagggaaatc atctggttt 960
 aagaagaagtt ttctgtcttag tagaaaaagat aagaaaacaa ataaatccat gtatgaatgc 1020
 aagaagagtg atcagtagca cacagctgac gtacccacat acgaaagaagt gacaccgtat 1080
 cggcgacaaa ctaatgaaaa atacagactc gttgtcttgg ttgggtcccg 1140
 ctgaatgaac tgaaacgaaa gctgctgatc agtgacaccc agcactatgg cgtgacagtg 1200
 ccccatacca ccagagcaag aagaagccag gagagtatgg gtgttgaata cattttcatt 1260
 tccaaggcatt tgtttgagac agatgtacaa aataacaagt ttattgaata tggagaat 1320
 aaaaacaact actacggcac aagtatagac tcagttcgt ctgtccttcg 1380
 gtttgggtgt tgatgttca gcctcataca gtgaaggcatt taaggacact agaatttaag 1440
 ccctatgtga tatttataaa gcctccatca atagagcgt tgagagaaac aaaaaaaaaat 1500
 gcaaagagta tttcaagcag agatgacca ggtgctgaa aacccttcac agaagaagat 1560
 tttcaagaaa tgattaaatc tgcacagata atggaaagtc aatatggtca tcttttgac 1620
 aaaattataa taaatgatga cctcaactgtg gcattcaatg agctaaaac aacttttgac 1680
 aaattttagaga cagagacca ttgggtgcca gtgagctggt tacattcata a 1731

<210> 46
 <211> 576
 <212> PRT
 <213> homo sapiens

<400> 46
 Met Pro Ala Leu Ser Thr Gly Ser Gly Ser Asp Thr Gly Leu Tyr Glu 15
 1 5 10
 Leu Leu Ala Ala Leu Pro Ala Gln Leu Gln Pro His Val Asp Ser Gln 20
 20 25 30
 Glu Asp Leu Thr Phe Leu Trp Asp Met Phe Gly Glu Lys Ser Leu His 35
 35 40 45
 Ser Leu Val Lys Ile His Glu Lys Leu His Tyr Tyr Glu Lys Gln Ser 50
 50 55 60
 Pro Val Pro Ile Leu His Gly Ala Ala Ala Leu Ala Asp Asp Leu Ala 65
 65 70 75 80
 Glu Glu Leu Gln Asn Lys Pro Leu Asn Ser Glu Ile Arg Glu Leu Leu 85
 85 90 95
 Lys Leu Leu Ser Lys Pro Asn Val Lys Ala Leu Leu Ser Val His Asp 100
 100 105 110
 Thr Val Ala Gln Lys Asn Tyr Asp Pro Val Leu Pro Pro Met Pro Glu 115
 115 120 125
 Asp Ile Asp Asp Glu Glu Asp Ser Val Lys Ile Ile Arg Leu Val Lys 130
 130 135 140
 Asn Arg Glu Pro Leu Gly Ala Thr Ile Lys Lys Asp Glu Gln Thr Gly 145
 145 150 155 160
 Ala Ile Ile Val Ala Arg Ile Met Arg Gly Gly Ala Ala Asp Arg Ser 165
 165 170 175
 Gly Leu Ile His Val Gly Asp Glu Leu Arg Glu Val Asn Gly Ile Pro 180
 180 185 190
 Val Glu Asp Lys Arg Pro Glu Glu Ile Ile Gln Ile Leu Ala Gln Ser 195
 195 200 205
 Gln Gly Ala Ile Thr Phe Lys Ile Ile Pro Gly Ser Lys Glu Glu Thr 210
 210 215 220
 Pro Ser Lys Glu Gly Lys Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn 225
 225 230 235 240
 Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe 245
 245 250 255
 Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp 260
 260 265 270
 Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile 275
 275 280 285
 Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu 290
 290 295 300
 Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe 305
 305 310 315 320
 Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser 325
 330 335

Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro
 340 345 350
 Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr
 355 360 365
 Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu
 370 375 380
 Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val
 385 390 395 400
 Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu
 405 410 415
 Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn
 420 425 430
 Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser
 435 440 445
 Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu
 450 455 460
 Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys
 465 470 475 480
 Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu
 485 490 495
 Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala
 500 505 510
 Ala Lys Pro Phe Thr Glu Glu Asp Phe Gln Glu Met Ile Lys Ser Ala
 515 520 525
 Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile
 530 535 540
 Asn Asp Asp Leu Thr Val Ala Phe Asn Glu Leu Lys Thr Thr Phe Asp
 545 550 555 560
 Lys Leu Glu Thr Glu Thr His Trp Val Pro Val Ser Trp Leu His Ser
 565 570 575

<210> 47

<211> 1059

<212> DNA

<213> homo sapiens

<400> 47

atgaaacttt tcttccagat gtttatcaaa gccctctttg actataatcc taatgaggat 60
 aaggcaattc catgtaaaggaa agctgggcctt tctttcaaaa agggagatat tcttcagatt 120
 atgagccaag atgatcaac ttggtgccaa gcgaaacacg aagctgtatgc caaccccagg 180
 gcaggcttga tccccctcaaa gcatttccag gaaaggagat tggcttttag acgaccgaaa 240
 atattggttc agccctgaa agtttccaaac aggaaatcat ctggtttttag aagaagtttt 300
 cgtcttagta gaaaagataa gaaaacaaaat aaatccatgt atgaatgcaa gaagagtgtat 360
 cagtacgaca cagctgacgt acccacatac gaagaatgtga caccgtatcg ggcacaaaact 420
 aataaaaat acagactcgat tgcttgggtt ggtcccggtt gagtagggct gaatgaactg 480
 aaacgaaaggc tgctgtatcg tgacacccag cactatggcg tgacagtgcc ccataccacc 540
 agagcaagaa gaagccagga gagtgtatggt gttgaataca ttttcatttc caagcatttg 600
 tttagacatcg atgtacaaaa taacaagttt attgaatatcg gagaatataa aaacaactac 660
 tacggcacaa gtatagactc agttcggtct gtccttgcta aaaacaaaatgt ttgtttgtt 720
 gatgttcagc ctcatacagt gaagcattta aggacactag aatttaagcc ctatgtgata 780
 ttataaaagc ctccatcaat agagcggttg agagaaaacaa gaaaaaatgc aaagattatt 840
 tcaagcagag atgaccaagg tgctgcaaaa cccttcacag aagaagattt tcaagaaaatg 900
 attaaatctg cacagataat gggaaagtcaa tatggtcatc ttttgacaa aattataata 960
 aatgatgacc tcactgtggc attcaatgag ctcaaaaacaa ctttgacaa attagagaca 1020
 gagacccatt ggggccagt gagctggta cattcataa 1059

<210> 48

<211> 352

<212> PRT

<213> homo sapiens

<400> 48

Met Lys Leu Phe Phe Gln Met Phe Ile Lys Ala Leu Phe Asp Tyr Asn

1	5	10	15
Pro Asn Glu Asp Lys Ala Ile Pro Cys Lys Glu Ala Gly Leu Ser Phe			
20	25	30	
Lys Lys Gly Asp Ile Leu Gln Ile Met Ser Gln Asp Asp Ala Thr Trp			
35	40	45	
Trp Gln Ala Lys His Glu Ala Asp Ala Asn Pro Arg Ala Gly Leu Ile			
50	55	60	
Pro Ser Lys His Phe Gln Glu Arg Arg Leu Ala Leu Arg Arg Pro Glu			
65	70	75	80
Ile Leu Val Gln Pro Leu Lys Val Ser Asn Arg Lys Ser Ser Gly Phe			
85	90	95	
Arg Arg Ser Phe Arg Leu Ser Arg Lys Asp Lys Lys Thr Asn Lys Ser			
100	105	110	
Met Tyr Glu Cys Lys Lys Ser Asp Gln Tyr Asp Thr Ala Asp Val Pro			
115	120	125	
Thr Tyr Glu Glu Val Thr Pro Tyr Arg Arg Gln Thr Asn Glu Lys Tyr			
130	135	140	
Arg Leu Val Val Leu Val Gly Pro Val Gly Val Gly Leu Asn Glu Leu			
145	150	155	160
Lys Arg Lys Leu Leu Ile Ser Asp Thr Gln His Tyr Gly Val Thr Val			
165	170	175	
Pro His Thr Thr Arg Ala Arg Arg Ser Gln Glu Ser Asp Gly Val Glu			
180	185	190	
Tyr Ile Phe Ile Ser Lys His Leu Phe Glu Thr Asp Val Gln Asn Asn			
195	200	205	
Lys Phe Ile Glu Tyr Gly Glu Tyr Lys Asn Asn Tyr Tyr Gly Thr Ser			
210	215	220	
Ile Asp Ser Val Arg Ser Val Leu Ala Lys Asn Lys Val Cys Leu Leu			
225	230	235	240
Asp Val Gln Pro His Thr Val Lys His Leu Arg Thr Leu Glu Phe Lys			
245	250	255	
Pro Tyr Val Ile Phe Ile Lys Pro Pro Ser Ile Glu Arg Leu Arg Glu			
260	265	270	
Thr Arg Lys Asn Ala Lys Ile Ile Ser Ser Arg Asp Asp Gln Gly Ala			
275	280	285	
Ala Lys Pro Phe Thr Glu Asp Phe Gln Glu Met Ile Lys Ser Ala			
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Gln Ile Met Glu Ser Gln Tyr Gly His Leu Phe Asp Lys Ile Ile Ile			
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